

PHENIX WEEKLY PLANNING



September 18, 2014
Don Lynch

- Complete MPC North repairs and test
- Continue prep for MPC-Ex North installation
- Continue VTX/FVTX troubleshooting & repairs
- Continue FVTX cooling line and N2 distribution upgrades
- Continue assembly of MPC-Ex North (@ SB)
- Continue sPHENIX support
- MPC-Ex ESRC Review

Next Week

- Finish assembly of MPC-Ex North (@ SB)
- Begin Installing MPC-Ex North
- Continue VTX/FVTX troubleshooting & repairs
- Continue FVTX cooling line and N2 distribution upgrades
- Continue sPHENIX support

2014 planned Technical Support & 2014 Shutdown

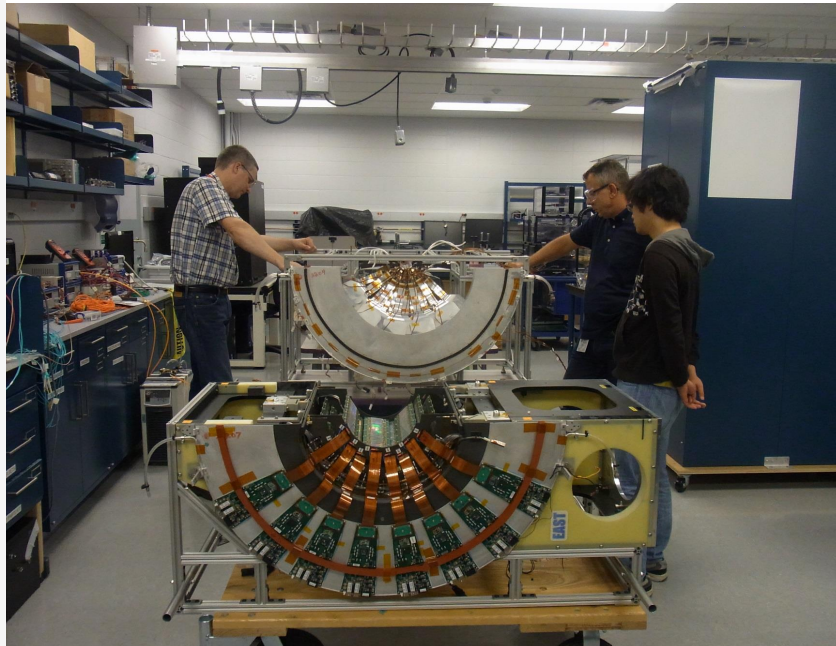
Open MMN hatch, MuTr North Sta 2 & 3 maintenance and repairs	7/9-9/30/2014 ?
Remove FVTX/VTX East & West to PHYSICS, repair and reinstall	7/14 – 10/15/2014
VTX/FVTX Upgrade cooling lines, chiller preventive maintenance	7/21-10/6/2014
Assemble & test MPC-Ex North, ready for installation	8/1-9/22/2014
MuTr Sta 1 & Sta. North troubleshooting and repairs	8/11-9/15/2014 ?
Electronic Cooling Water High Temp Alarm	8/11-9/30/2014
Prep MPC-Ex North installation area	8/18-9/22/2014
MPC North-remove damaged crystals, repair as necessary, re-install	Done ?
F/VTX Cooling line upgrades teflon to stainless	8/25-10/31/2014
F/VTX N2 supply manifold upgrade	8/25-10/31/2014
F/VTX Chiller preventative maintenance	8/25-10/31/2014
Reinstall MMS east vertical lampshade	9/2-9/26/2014
Install new MPC-Ex North, thoroughly test before moving CM north	9/8-10/17/2014
Assemble & test MPC-Ex South, ready for installation	9/2-10/31/2014

2014 planned Technical Support & 2014 Shutdown (cont'd)

Remove Sta 1 N scaffolds, Move CM North, Install scaffolding in Sta 1 S	10/10- 10/17/2014
Install MPC-Ex South	10/20-11/4/2014
Reinstall, reconnect, re-survey and re-commission VTX/FVTX	10/16-11/26/2014
sPHENIX Support	on-going
End of Shutdown Tasks (Move MS north, roll in EC , install collars, remove 10 ton cart, plates and manlifts, build shield wall, etc.)	12/1-12/12/2014
DC East & West maintenance & repairs	10/20-10/31/2014
Pink/White/Blue Sheets	12/1-12/19/2014
End of Shutdown Party	????
Start Flammable gas flow	????
Close shield wall, install radiation interlocks and prepare for run 14	12/31/2014
Start run 15	1/2/2015

Work Permits for 2014 Shutdown

- Start of Shutdown - Done
- VTX/FVTX East - Done
- MPC-Ex - Done
- MuTr Sta 1 N & S - Done (scaffold agreement done)
- MuTr North station 2/3 - Done
- MuTr South station 2/3 & MMS South Water leak - Done
- MPC North - Done
- DC East/West – need by 10/20
- End of Shutdown – need in December

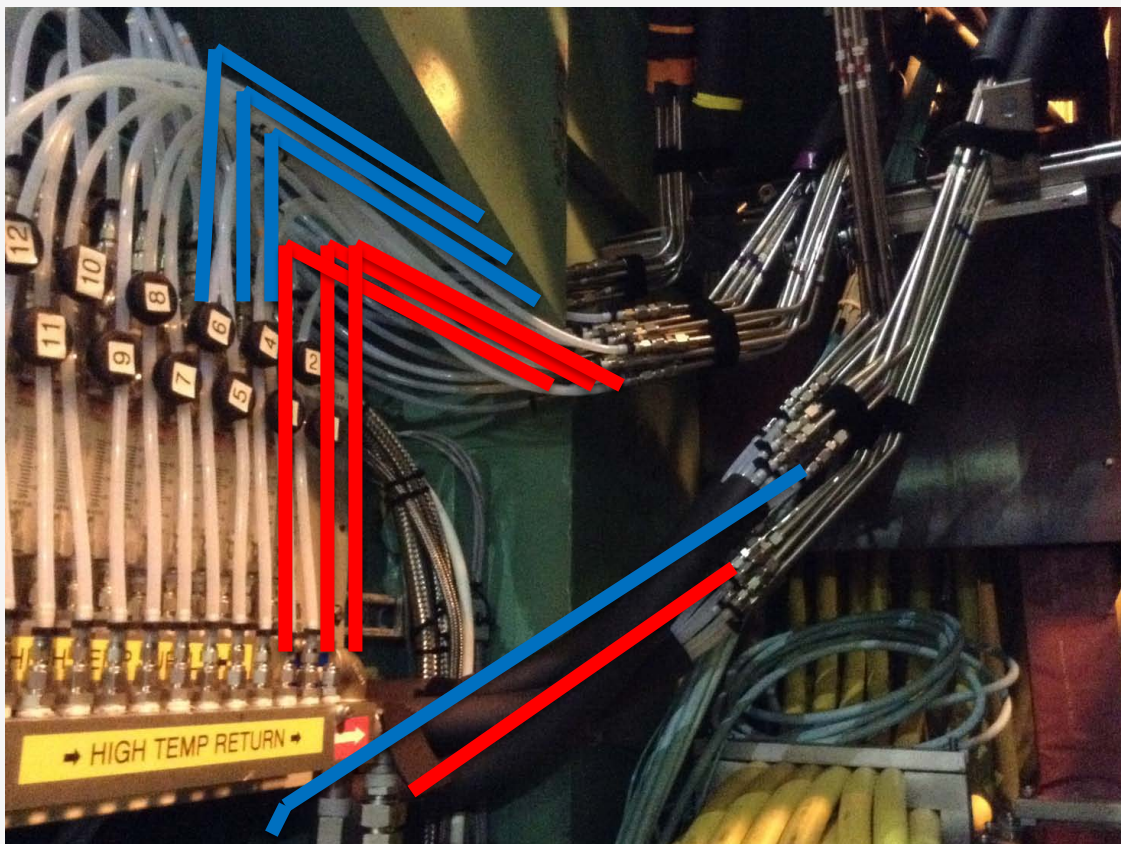


VTX/FVTX to be ready for re-installation NO LATER THAN 10/20/2014

Top manifold has 13 Supply and 13 return lines.
Both North and south need to be replaced.

Bottom manifold has 9 Supply and 9 Return lines
Both North and South need to be replaced

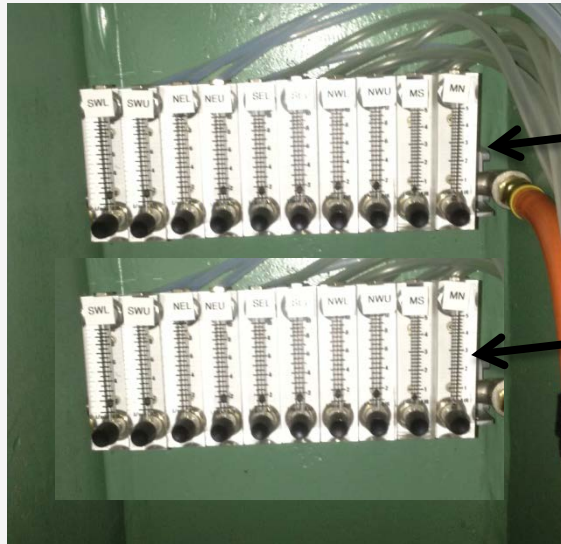
Current labeling on tubes needs
to be maintained and copied to
new lines



Bends need to be done
carefully so not to
restrict flow. Swage
elbows can also be used
for sharp bends

Replace All Teflon
lines with 1/4" ID 316
thin walled Stainless
McMaster
Coil: 89995K82
Or Rigid with Min ID
0.21" (89995K288)

VTX/FVTX N2 Supply Manifold.
Located on south side of central
magnet



Original N2 Distribution Panel

New N2 Distribution Panel

- 10 flowmeters
- 0-10lpm
- Output ¼" I.D barb
- Leave about 10" space between manifolds.

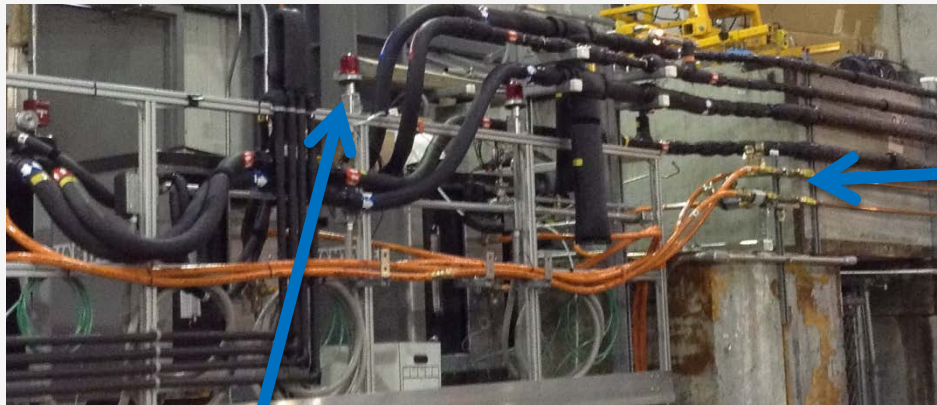
Shutdown work on chillers to help with reliability

1. Change pump seals on chillers 1 and 3
 - Chris replaced chiller 2's pump seal. There was some trial and error to get it right.
 - We have these parts
2. Replace both control solenoids and Filter on chiller 1 and 2
 - We have these parts
 - BNL HVAC guys. Schedule for Beginning of OCT
3. General annual maintenance on all 3 units listed in manual
 - HVAC guys/ Phenix Tech



Modifications to Water lines to make switchover less time consuming.

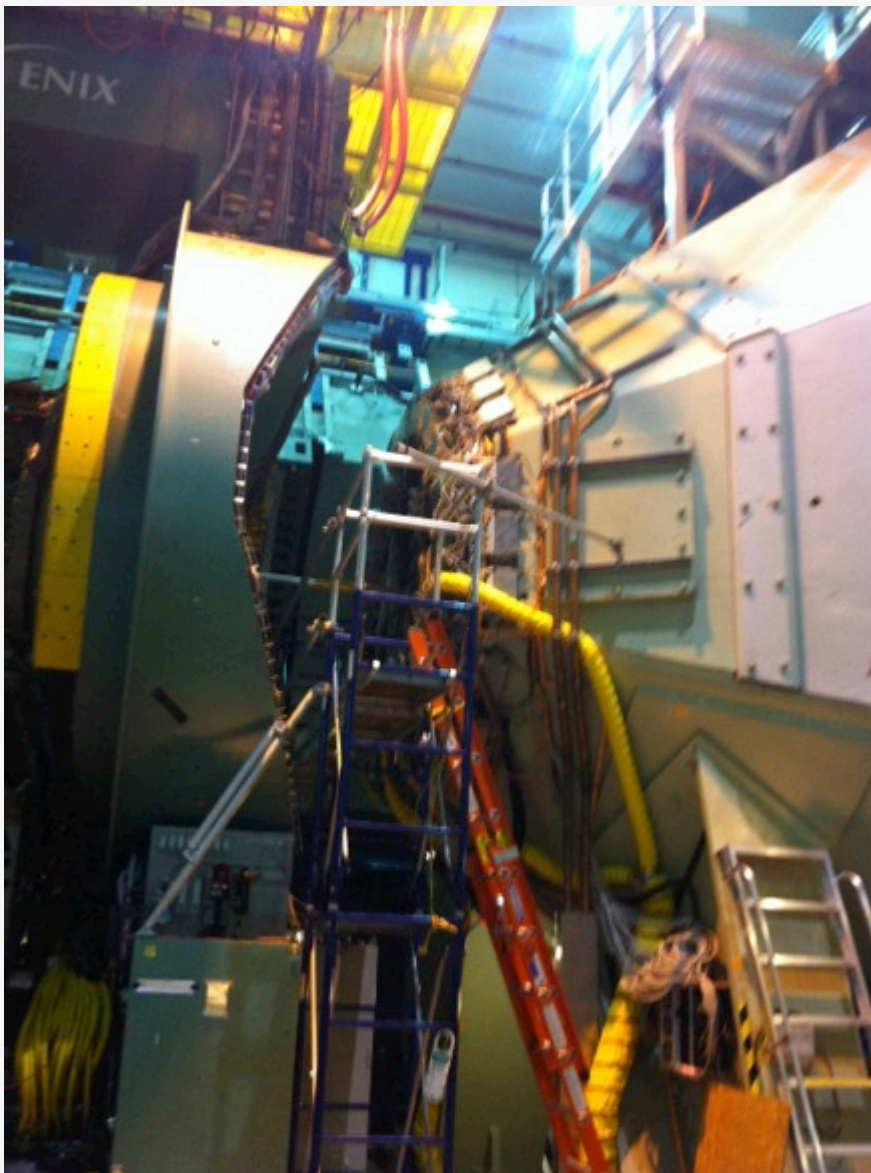
Permanently connect water lines to all 3 chiller through a new 3 channel manifold. Currently the manifold only has 2 channels. It needs to have a 3rd channel added for the spare chiller. We should also replace the flowmeter s with ones that have a smaller scale.



Manifold Location

Instrument spare chiller with alarms similar to other two chillers.

1. Need to add float switch to lid. (I have parts)
2. A third strobe and audible alarm added to rail. (Frank did this last time)



MPC-Ex North Just about ready to go.

ESRC Review yesterday:

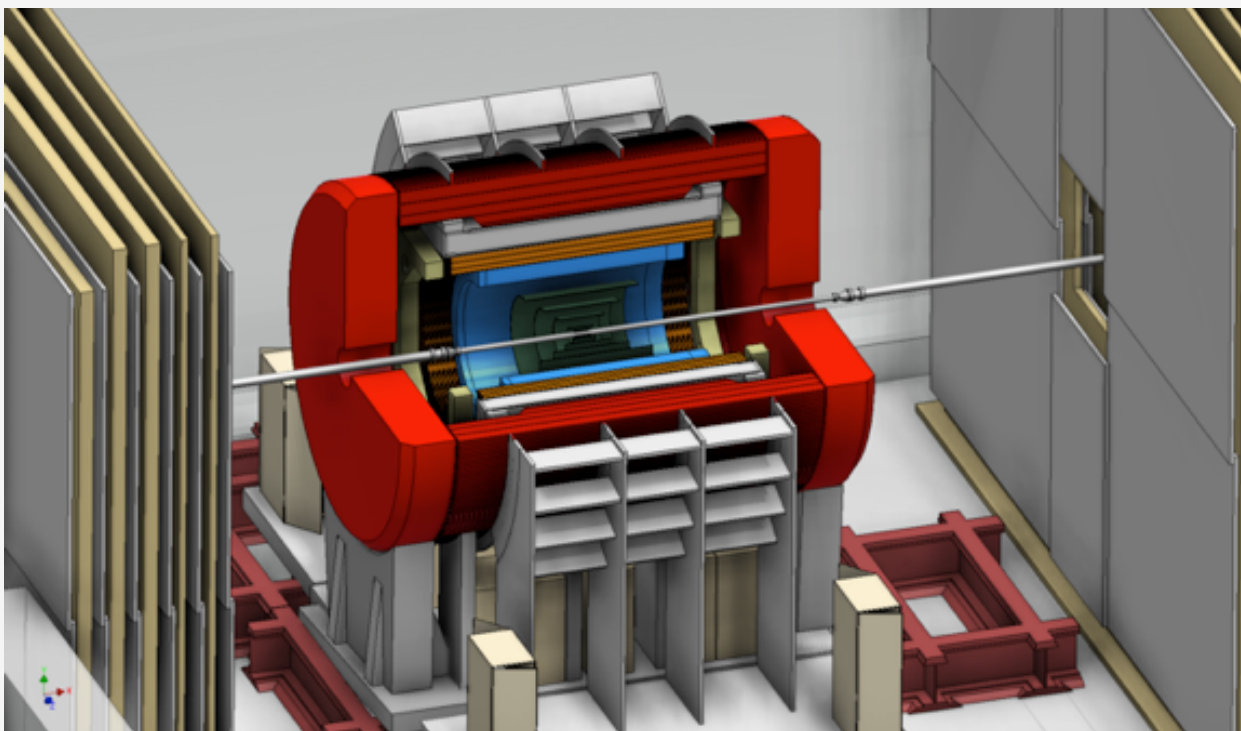
No major issues. Would like to see cable routing before we close up North side.

Electronics Cooling Water High Temperature Alarm

Display showing temperature of cooling water

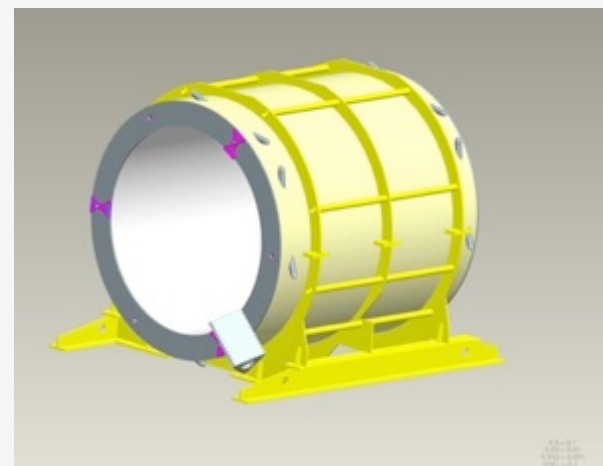
Add Alarm to Panel

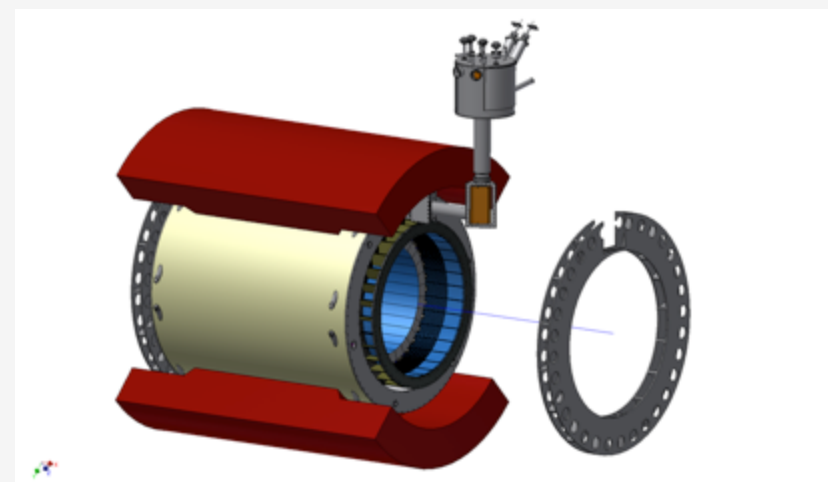
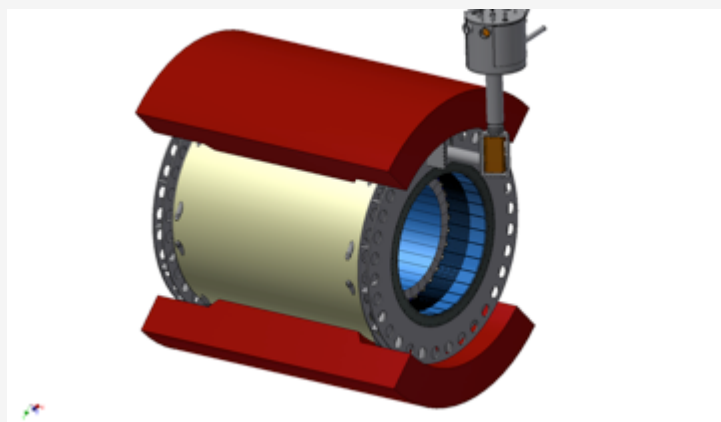


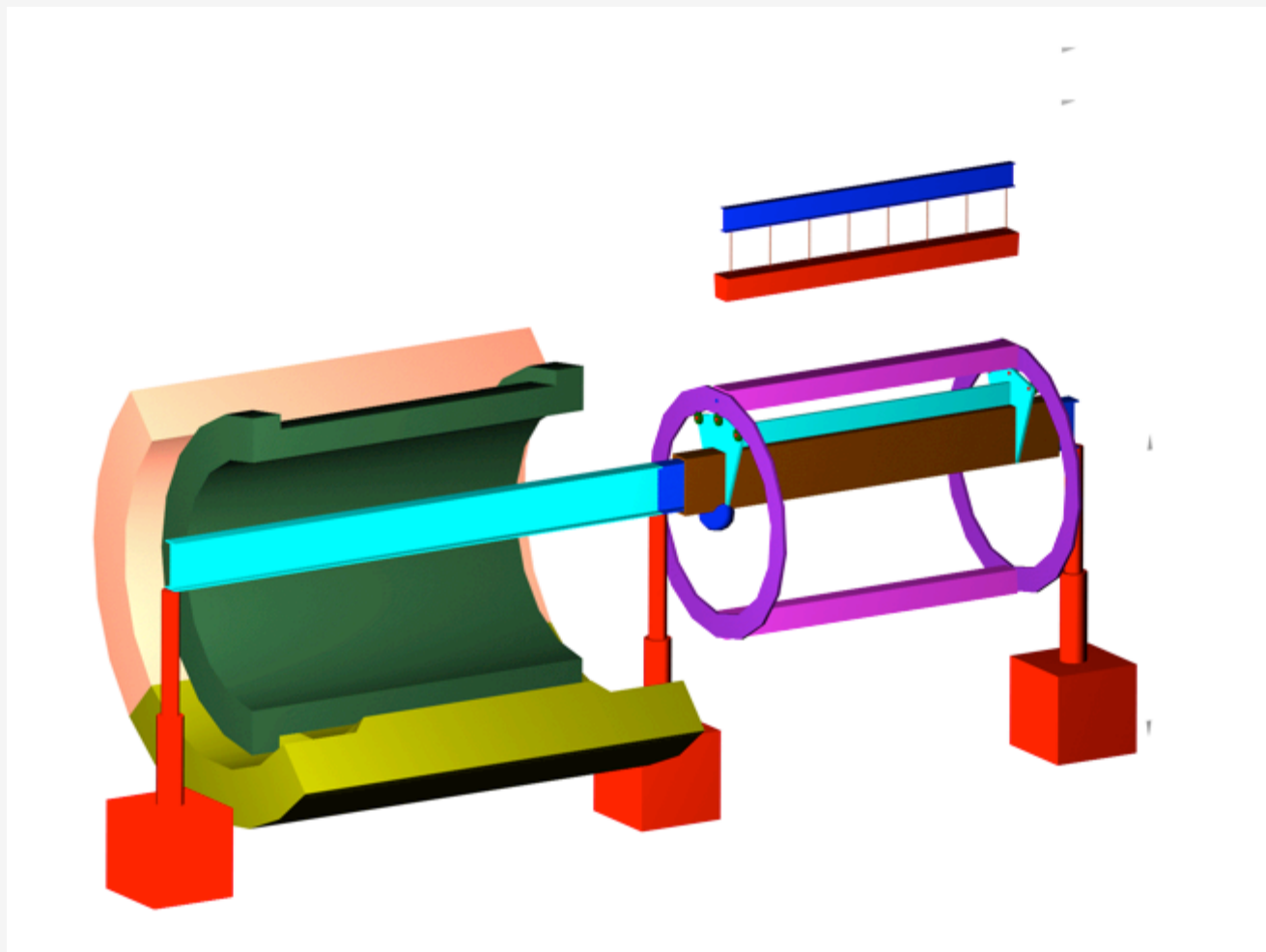


sPHENIX Update:

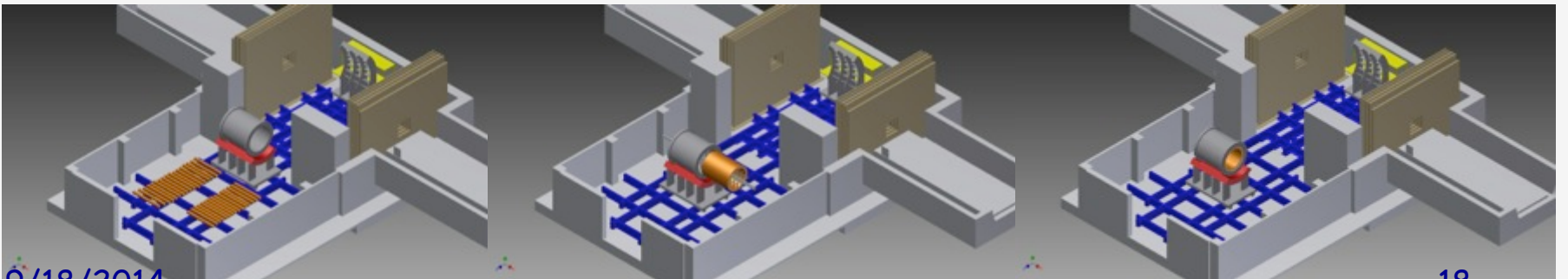
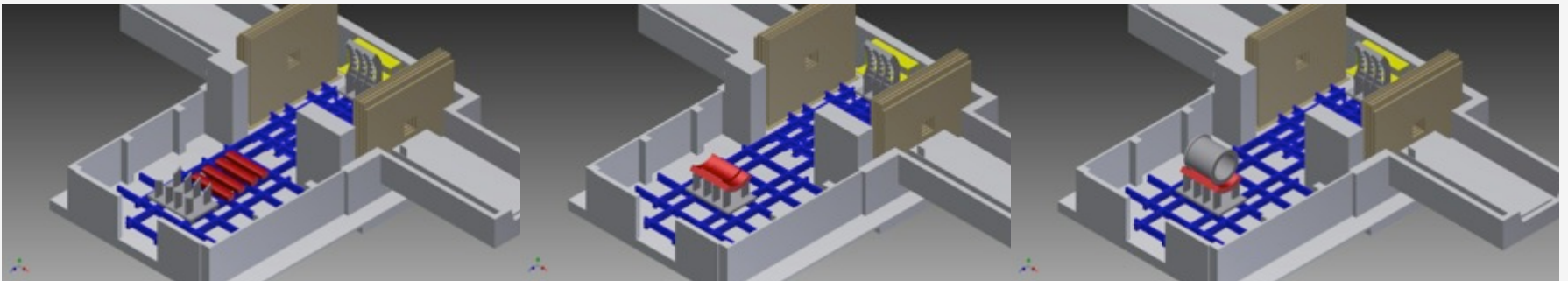
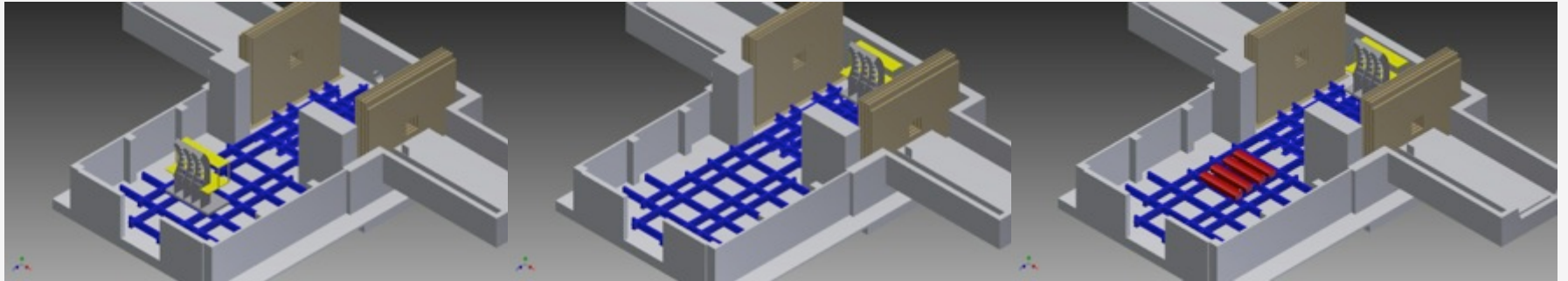
- Bi-weekly meeting yesterday:
 - Almost ready to ship; shipping fixtures done sent to SLAC today, Mkie Racine (SLAC) to install them. Expect to ship ~10/6. May send someone to be there when it ships out of SLAC.
 - Hi-pot test to be performed when received at BNL
 - Need to prepare for a safety committee review (ASME cert.)
 - May need a 500 liter Dewar for operation of magnet during a shutdown (e.g. mag mapping) would be located on CP upper platform.
 - Expect to perform low field cold test by ~June 30, 2015
 - Next meeting: 1pm, Wed, Oct 1, testing plan to be discussed in more



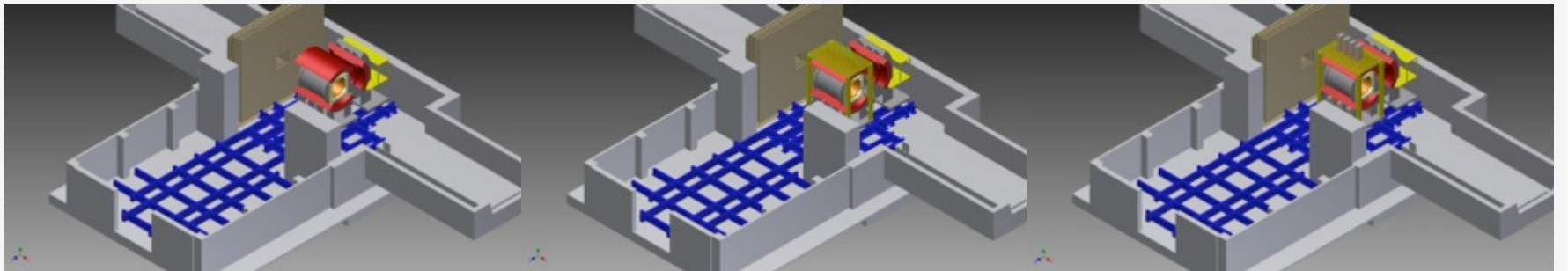
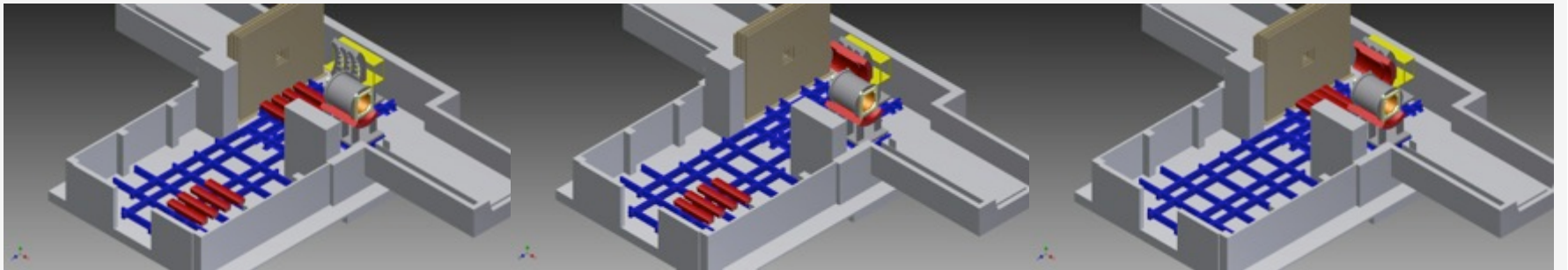
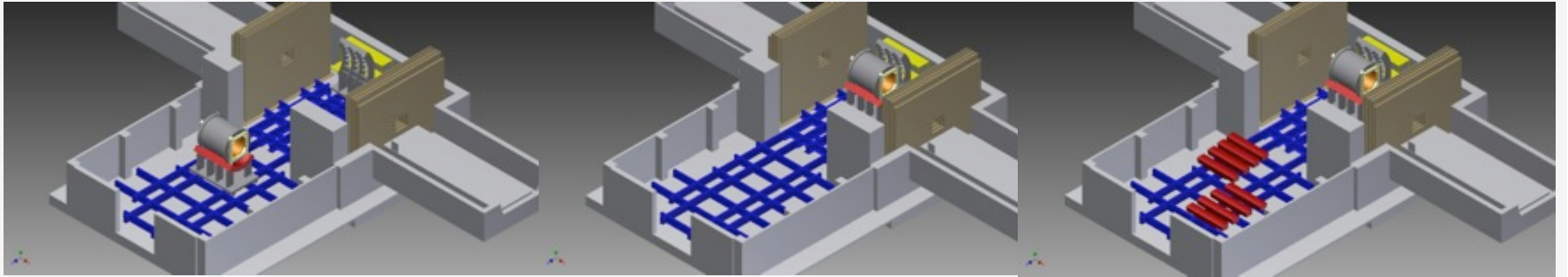




TECHNICAL SUPPORT NO. 4

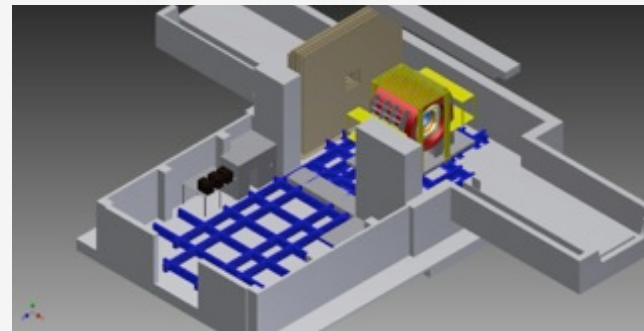
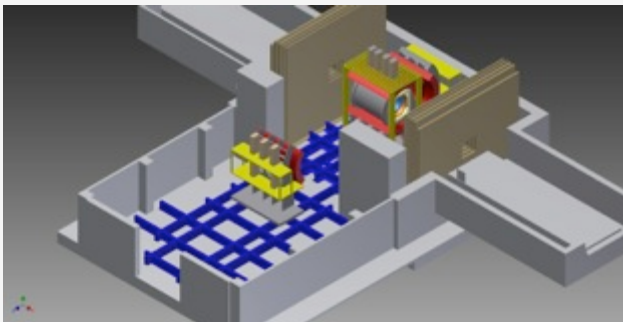
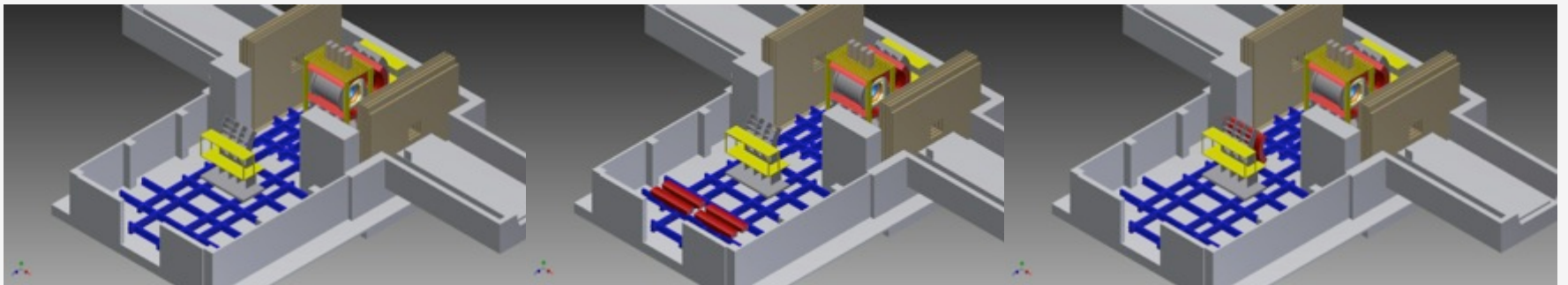
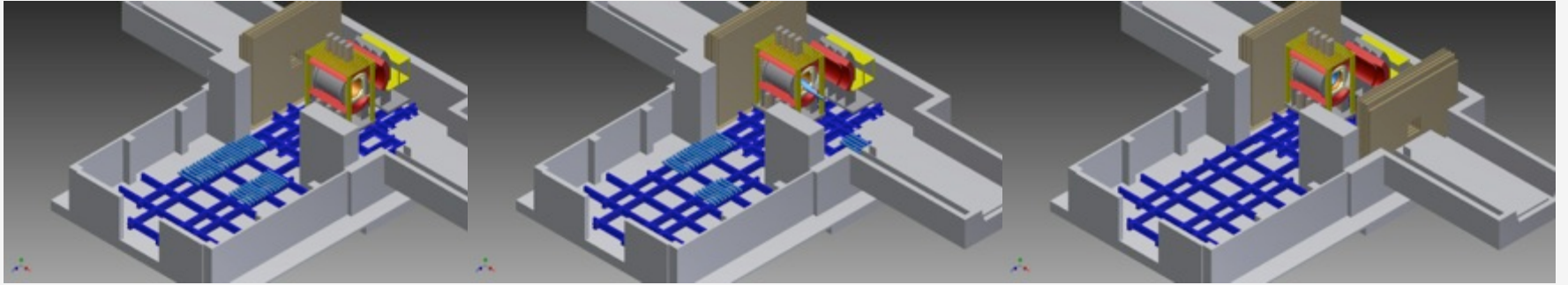


TECHNICAL SUPPORT NO. 4



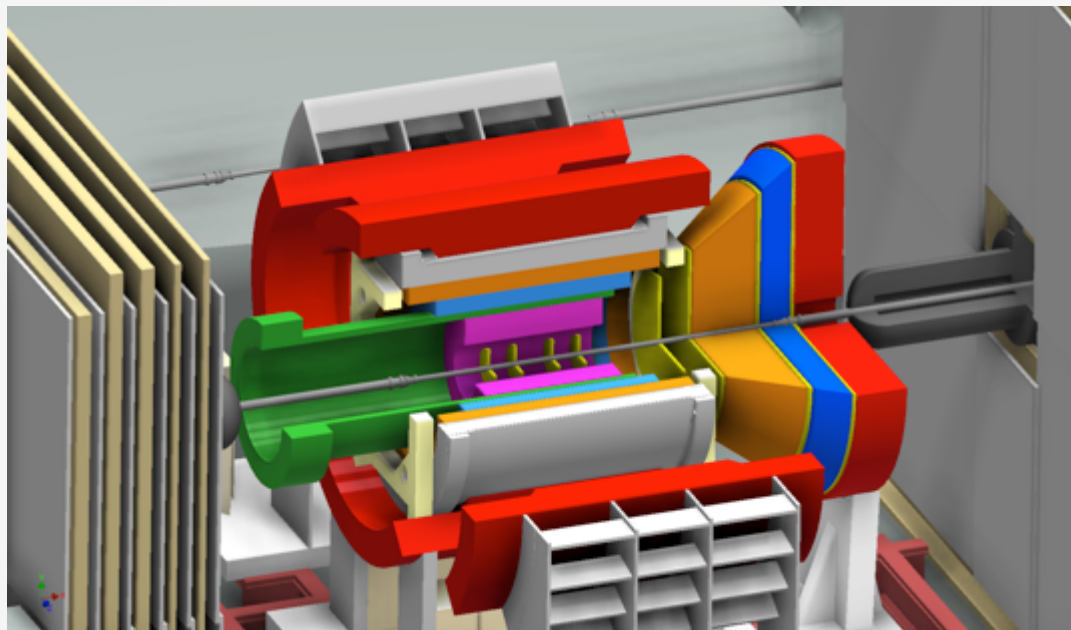
Global assembly Plan

TECHNICAL SUPPORT NO. 4



9/18/2014

ePHENIX



From Ray Karol:

1. Please spend the time to see if you can get rid of any unused or outdated chemicals that are stored in your cabinets. If you have chemicals you want to dispose of, please put them into a secondary container. ESSHQ Division will write the items up and send them to the 90 day area. If you don't have any secondary containers, ESSHQ Division will provide them for you. Contact Len Campione or Bill Needrith for help.

2. Think ahead for the winter weather:

You can reduce winter and other slipping hazards by buying shoe covers at the following websites. Make sure that you only use the covers in the areas that they are intended for as described at the website. **Use your group account to order:**

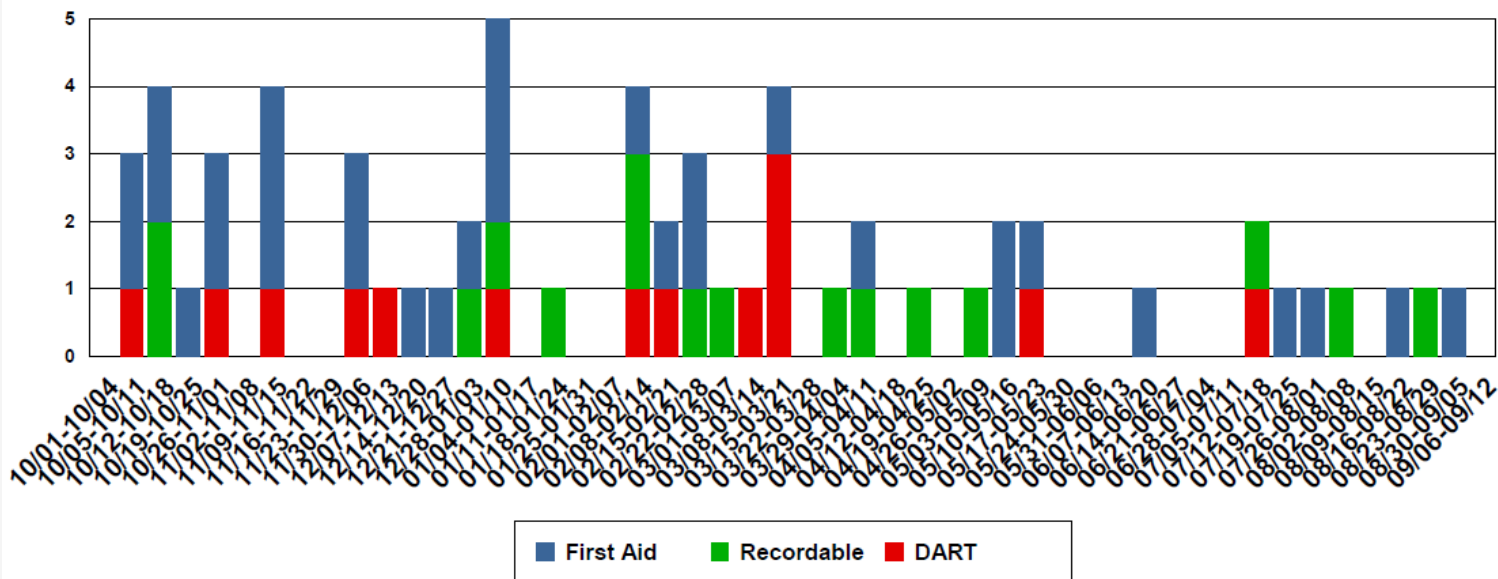
<http://www.jordandavid.com/>

Or

<http://yaktrax.com/>



Injuries Per Week (FY) As of 9/12/2014



Injury Status:

FY14 YTD: DART – 14, TRC – 30, First Aid – 32

FY13: DART – 16, TRC – 38, First Aid – 53

FY12: DART – 19, TRC – 36, First Aid – 69

FY14 Injury Listing:

<https://intranet.bnl.gov/esh/shsd/seg/OccInj/BNLINjuries.aspx>

Recent Injuries

9/4/14	First Aid	An employee was stung by a yellow jacket. At the OMC, first aid was given.
--------	-----------	--



9/18/2014

Recent Events

9/10/14	Non-Reportable	F&O staff discovered a significant accumulation of water in the basement of Bldg. 515. Fire-Rescue was contacted and responded to control the scene. The Chilled Water Main Supply Valve in Bldg. 510 (dry area) was shutdown to isolate the source of the water. It was determined by the Electrical Safety Inspector that the Bldg. 515 basement area was electrically safe to enter. After this determination, the cause of the leak was discovered to be the shearing of a bolt on a Victaulic coupling, which caused the coupling to separate on a 3-in. ID chilled water line. System adjustments were made to ensure that the Data Center was adequately cooled and that there was no loss of equipment. Recovery operations are underway to vacuum residual water and dry out electrical equipment. Electrical equipment that may have gotten wet will be inspected under a controlled process. The Facility Complex Engineer is evaluating the sheared bolt. (Event Link)
9/9/14	Non-Reportable	While performing work on the hill by the 705 Reactor Stack, Environmental Protection Division staff noticed that the fencing around the cage of the Stack Ladder was cut open at the top of the stack pedestal. This area can be accessed from the ground by walking up the Silencer to the top of the Pedestal and this is likely how it was accessed to cut/damage it. A work order to repair this has been submitted. It is not known precisely when this occurred, but likely occurred after the last routine inspection in May. BNL Security has been made aware of it. (Event Link)
9/5/14	Non-Reportable	A wipe survey of 16 copper/beryllium legacy wrenches stored in a cabinet in Bld. 902 indicated beryllium contamination greater than housekeeping levels of 3 micrograms/100 cm square. Specifically, three readings were in the range of 6.9 to 9.5 micrograms/100 cm square. There was no personnel contamination. The cabinet has been posted for beryllium contamination. (Event Link)
9/5/14	SC-BNL	Two nitrogen cylinders were loaded on a gas cylinder delivery truck and secured with straps. When the truck began to drive away, the straps failed and the cylinders tipped over. It appears that the strap buckles failed. There have been previous problems with this type of strap and it was in the process of being replaced. However, the straps used in this event appeared acceptable when the cylinders were being secured in the truck. Use of the truck has been put on hold, and the cylinders were unloaded from the truck and safely stored in the warehouse. PPM has initiated an investigation. There were no injuries and no damage to the cylinders. (Event Link)

Where To Find PHENIX Engineering Info

2014 Shutdown Continues !

Summer Ends Next Monday at 10:29 PM



3rd Annual PHENIX Mild Hogs Bike Trip Tomorrow!

http://www.phenix.bnl.gov/WWW/INTEGRATION/ME&Integration/DRL_SSint-page.htm

9/18/2014



25

A cell phone you can bend as much as you like and it will still do everything a smart phone does.



The world's first virtual shopping center opened in Korea . All the products are just LCD screens that allow you to order the items by touching the screen. When you get to the counter, your items are already bagged and ready to go.



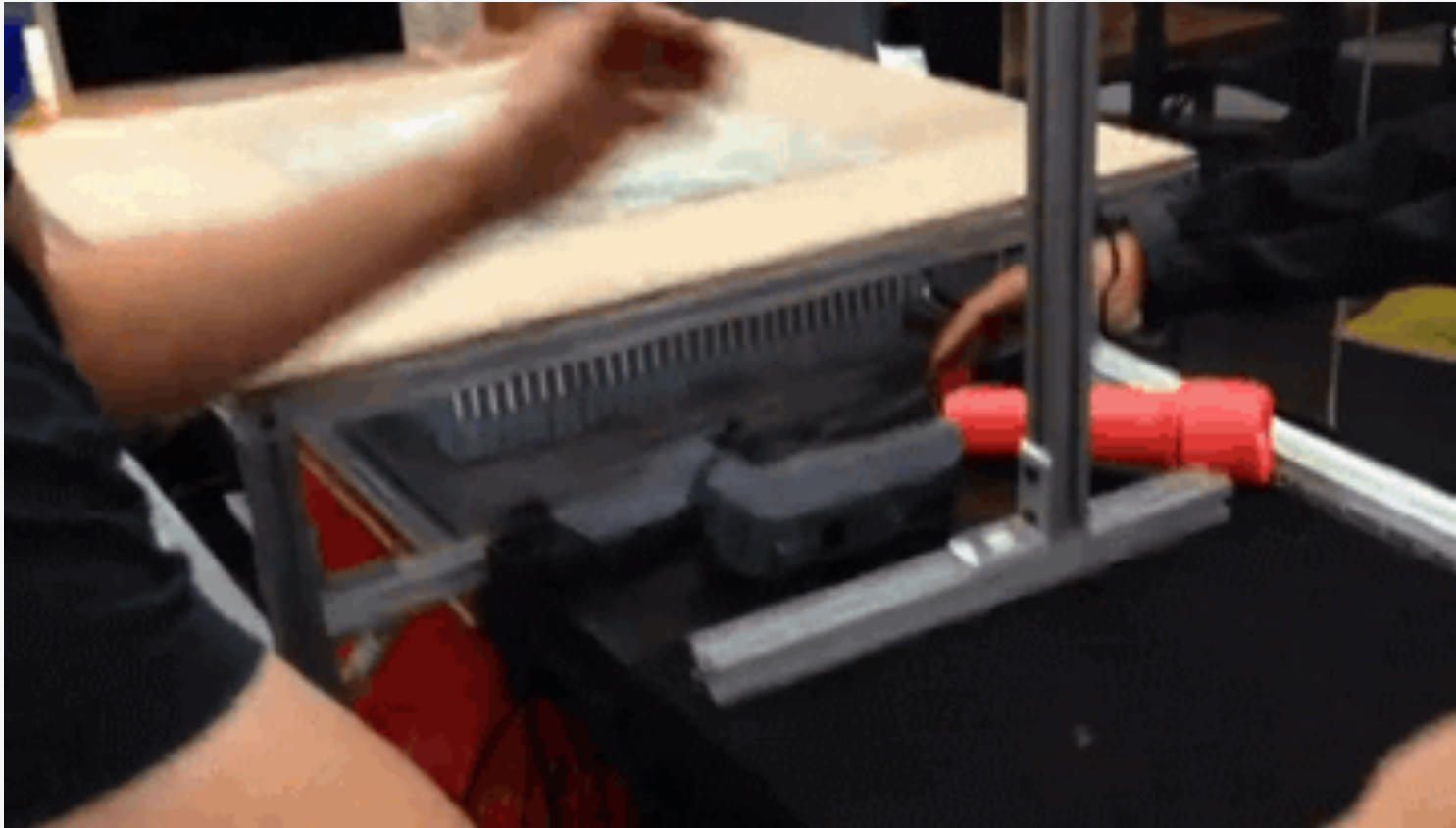
Your personal computer ring can play music, check your email, give you alerts and even allows you to browse or chat with others.



This trash can follows you around and calculates where to stand to catch your thrown garbage!



This motion tracking table morphs its surface to mimic your movements, allowing you to control objects from the other side of the planet if you so choose.



This windowed door turns opaque whenever you lock it.



This incredible app translates signs from video and in real time!



New casts can be printed with a 3D printer, are lighter, more comfortable and just as strong.



Bionic hands are now so advanced they can perform even delicate and complex movements.

